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### 01: Introduction to Technical Communication

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## Introduction to Technical Writing

Cassandra Race

### Chapter Objectives

Upon completion of this chapter, readers will be able to:

1. Define technical writing.
2. Summarize the six characteristics of technical writing.
3. Explain basic standards of good technical writing.

## The Nature of Technical Writing

Did you know that you probably read or create technical communication every day without even realizing it? If you noticed signs on your way to work, checked the calories on the cereal box, emailed your professor to request a recommendation, or followed instructions to make a withdrawal from an ATM; you have been involved with technical, workplace, or professional communication.

So what? You ask. Today, writing is a more important skill for professionals than ever before. The National Commission on Writing for Americas Families, Schools, and Colleges (2004) declares that writing today is not a frill for the few, but an essential skill for the many, and goes on to state that much of what is important in American public and economic life depends on strong written and oral communication skills. A survey by the Workforce Solutions group at St. Louis Community College asserts many employers are concerned at the large number of college graduates applying for jobs who lack communication and interpersonal skills (White, 2013).

Good communication skills, particularly in writing, are essential if you are going to succeed in the workplace. The working world depends on written communication because within modern organizations, almost every action is documented in writing. Furthermore, many kinds of writing, including correspondence, presentations using visuals like PowerPoint, technical reports, and formal reports are prevalent in most workplaces. And the writing has to be good, accurate, clear, and grammatically correct. Kyle Wiens (2012) writes in an article in the Harvard Business Review: "If you think an apostrophe was one of the 12 disciples of Jesus, you will never work for me. If you scatter commas into a sentence with all the discrimination of a shotgun, you might make it to the foyer before we politely escort you from the building. I have a zero tolerance to grammar mistakes that make people look stupid."

Check out this video for more ideas about the kinds of writing that will be expected of you, especially if you are in a STEAM (Science, Technology, Engineering, Arts, and Mathematics) field.

Writing in the Workplace pt. 1

## So how do we define this kind of writing?

In this text, the word "document" refers to any of the many forms of technical writing, whether it be a web page, an instruction manual, a lab report, or a travel brochure.

Technical communication is the process of making and sharing ideas and information in the workplace as well as the set of applications such as letters, emails, instructions, reports, proposals, websites, and blogs that comprise the documents you write. The Society of Technical Communications (STC) defines technical communication as a broad field that includes any form of communication that is about technical or specialized topics, that uses technology such as web pages or help files, or that provides instruction about how to do something. (n.d.)

Specifically, technical writing involves communicating complex information to a specific audience who will use it to accomplish some goal or task in a manner that is accurate, useful, and clear. Whether you write an email to your professor or supervisor, develop a presentation or report, design a sales flyer, or create a webpage, you are a technical communicator.

**Where does it come from?** According to the STC (n.d.), technical communications origins have actually been attributed to various eras dating back to Ancient Greece (think Rhetoric!) and to the Renaissance, but what we know today as the professional field of technical writing began during World War I from the need for technology based documentation for military and manufacturing industries. As technology grew, and organizations become more global, the need and relevance for technical communication emerged, and in 2009, the U.S. Bureau of Labor Statistics recognized Technical Writer as a profession (STC).

**What does technical communication or workplace writing look like?** Check out this page from the U.S. Environmental Protection Agency about climate change. Who is the target audience? What information does this document provide? What task or goal will it help to accomplish? What elements of this document do you think make it useful? Does it solve a problem? What about the style of the writing in this government document? Is it concise and accurate? This is just one example of the many kinds of technical documents you will work with in this course.

Be sure to notice the annotations in the margins of the document. Do you agree that this is an effective document? Read on for further discussion about the characteristics of technical writing.

## Let's Take a Look at Characteristics of Technical Writing

Mike Markell (2015), Sidney Dobrin (2010), Elizabeth Tebeaux (2012), Sam Dragga (2012), and others all identify similar characteristics of technical writing and emphasize that it must adhere to the highest standards.

**Focused on audience:** Technical and workplace documents address a specific audience. The audience may be an individual or a group, and it may or may not be known to the writer. While there is always a primary audience addressed, there may be a secondary audience. Thus, an understanding of the reader or user of a technical document is important.

**Rhetorical, persuasive, purposeful, and problem-oriented:** Technical communication is all about helping the reader or user of a document solve a problem or compel others to act or do. For example, the syllabus of your calculus class informs the students what is expected of them; the university's web site provides information to potential students about how to apply or to current students about where to seek assistance. Identification of a specific purpose and a particular audience are the first two steps of technical writing.

**Professional:** Technical communication reflects the values, goals, and culture of the organization and as such, creates and maintains the public image of the organization. Look back at your university's web site to see what image it conveys, or consider the United States Government.

On October 13, 2010, President Obama signed into law the Plain Writing Act of 2010 (the Act) which is designed to promote clear government communication that the public can understand and use. The Act calls for writing that is clear, concise, and well-organized. Check out this resource on Plain Language.

**Design Centered:** Technical communication uses elements of document design such as visuals, graphics, typography, color, and spacing to make a document interesting, attractive, usable, and comprehensible. While some documents may be totally in print, many more use images such as charts, photographs, and illustrations to enhance readability and understanding and simplify complex information.

**Research and Technology Oriented:** Because of workplace demands, technical and workplace writing is often created in collaboration with others through a network of experts and designers and depends on sound research practices to ensure that information provided is correct, accurate, and complete.

**Ethical:** Lastly, technical communication is ethical. All workplace writers have ethical obligations, many of which are closely linked to legal obligations that include liability laws, copyright laws, contract laws, and trademark laws. You'll learn more about these in a later chapter on ethics

## What Standards Should I Observe to Make my Writing Successful?

Good question! As a member of an organization or team, even as a student, you want to produce the absolute best writing you can. Here are the standards you must follow and some tips to help you. If you keep these in mind as you work through your learning in this text, hooray for you! You get the great writer award! You will also have a tremendous advantage in the workplace if your communication and design skills meet these standards.

- First and most important, your writing must be **honest**. Your trustworthiness in communication reflects not only on you personally but on your organization or discipline.

- Your writing has to be **clear** so that your reader can get from it the information you intended. Strive to make sure that you have expressed exactly what you mean, and have not left room for incorrect interpretations.
- Next, good writing is **accurate**. Do your homework and make sure you have your facts right. There is no excuse for presenting incorrect information.
- Also make sure you have all the facts, as your writing must also be **complete**. Have you included everything that your reader needs?
- Your audience has neither time nor patience for excessive verbiage, so simplify and cut any clutter. Good writing is always **concise** writing.
- Your document should be **attractive** and pleasing to look at. Just as you wouldn't eat a hamburger from a dirty plate, your reader will not be moved by a document that is not carefully designed and professional.

Without exception, grammar, spelling, punctuation, and sentence structure have to be **correct**. Even a single grammatical or spelling error can cause your reader to dismiss you as not professional, as not caring enough to edit carefully. Poor writing at this level reflects poorly on your organization as well, and most companies can't mandate good writing with a law!

## Accessibility in Technical Writing

Accessibility is perhaps the most important standard for excellence in technical communication. At the very least, the design of your document should be useful, easy to navigate, and with all information easy to locate. Specifically, websites and e-learning documents must meet ADA (American Disabilities Act) laws for accessibility. The link below will provide more information about ADA for you.

What is the Americans with Disabilities Act (ADA)?

## Whats next? Let's get started!

Nobody wants to read anything you have written.

So how can you make sure they will? Say what? After years of having willing and captive audiences (i.e. your mom and your teachers) for every word you put on paper, we are telling you that nobody wants to read what you have written? Yep. They don't want to, but they have to. Technical or workplace writing is intended to solve problems, seek solutions, and provide necessary information that workers will use to, well, solve problems, seek solutions, and provide necessary information. And to do those things well, you as the writer have to do several things well.

How do *you* ensure that your document will be useful to your readers? Of course, you will make sure that it adheres to the standards of excellence in this chapter. But for now, let's get started with some strategies to make your writing accessible, useful, and excellent!

Here are a few simple things to practice right now. Jakob Nielsen (1997) observes that readers, or users, won't read content unless it is clear, simple, and easy to understand. The late William Zinsser (2006), author of *On Writing Well*, emphasizes the same points when he states, "Good writing has an aliveness that keeps the reader reading from one paragraph to the next, and it's not a question of gimmick to personalize the author. It's a question of using the English language in a way that will achieve the greatest clarity and strength." (p.5).

First, make sure your writing is **legible**. Legible? Sure. Is the font large enough to be read by a variety of audiences? Is it an easy to read font style that is appropriate for the content? If you are writing for the internet, these considerations are especially significant. If there are problems with legibility in your document, it will be of little use to your reader.

Then, make sure your writing is **readable**. If you have identified and analyzed your audience, you are off to a good start. Readable means that your document can be easily understood by your target audience, and refers to the formula where by words, sentence length, and sentence complexity determine how hard or easy your sentences are to read. If your readability is too high for the audience, then they will either take more time getting what they need from your writing, or it won't be of any use to them at all. Too low? You may come across as condescending, if not a lousy writer.

Microsoft Word has a readability test built into the program under the Review heading that will give you a good starting place. However, don't rely completely on it to assess the ease or difficulty of your writing. Have a trusted colleague take a look and give you feedback. You can also use one of many free online readability formulas.

Free Readability Test!

Finally, your writing may be legible and readable, but how well can your audience comprehend, or understand it in the way you intended? Is the reader able to use the document in the manner you meant? To enhance the readers

**comprehension**, use language and terminology familiar to the reader, and limit paragraphs to one main idea. Strive for brevity if your users will be reading on tablets or mobile devices. Use visuals such as charts or diagrams to present a lot of information in a graphic format. You can evaluate how easy your document is to comprehend by getting another set of eyes on it.

Ask a colleague to read your text and then tell you what the important ideas are.

How are you doing so far? Take the quiz to see how much you've learned!

## Got it? Then head for the exercises and activities below.

**Exercise 1:** Locate some examples of what you consider technical writing. These may include correspondence, journal articles, lab reports, web pages, or advertisements. In small groups with other classmates, discuss how the documents reflect the characteristics of technical writing. After your group has analyzed the document, present it to the entire class and explain how it meets the characteristics of a technical document.

**Exercise 2:** Locate some of the free readability tools on the Internet and apply one to a section of writing, such as this text, to evaluate the reading level. What do you think is an ideal readability level for a bank's web site; a college history text, or even the school's website? In a memo to your instructor, discuss the importance of readability measures in creating useful technical documents.

**Exercise 3:** Locate an instruction manual for a product you may own. Analyze it against the standards listed in the chapter for good technical writing. Submit your analysis in a memo to your instructor.

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